

# isc N-Channel MOSFET Transistor IPP076N15N5, IIPP076N15N5

## • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 7.6m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

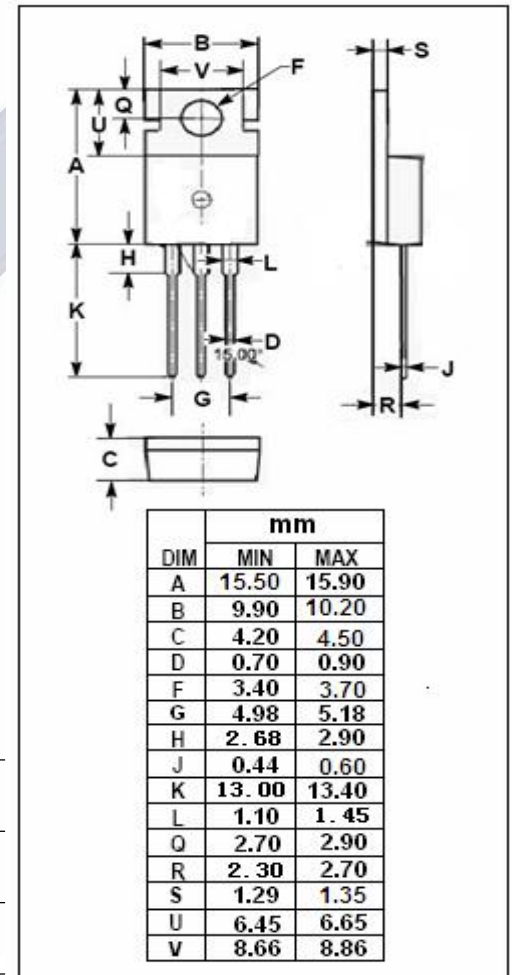
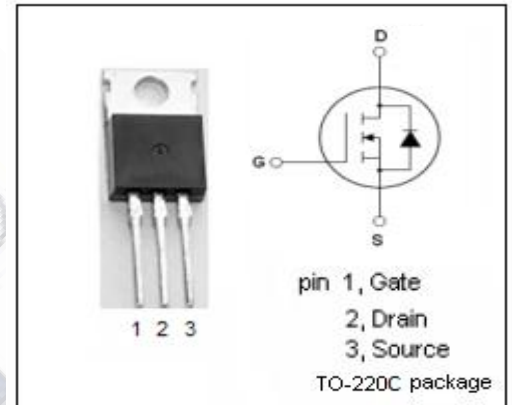
- Ideal for high-frequency switching and synchronous rectification

## • ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )

| SYMBOL    | PARAMETER                            | VALUE    | UNIT       |
|-----------|--------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                 | 150      | V          |
| $V_{GS}$  | Gate-Source Voltage                  | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous             | 112      | A          |
| $I_{DM}$  | Drain Current-Single Pulsed          | 448      | A          |
| $P_D$     | Total Dissipation @ $T_c=25^\circ C$ | 214      | W          |
| $T_j$     | Max. Operating Junction Temperature  | 175      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                  | -55~175  | $^\circ C$ |

## • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                             | MAX | UNIT         |
|----------------|---------------------------------------|-----|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance    | 0.7 | $^\circ C/W$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62  | $^\circ C/W$ |



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## ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL       | PARAMETER                      | CONDITIONS                    | MIN | TYP | MAX | UNIT      |
|--------------|--------------------------------|-------------------------------|-----|-----|-----|-----------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage | $V_{GS}=0V; I_D=1mA$          | 150 |     |     | V         |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}; I_D=160\mu A$ | 3   |     | 4.6 | V         |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V; I_D=56A$         |     |     | 7.6 | $m\Omega$ |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}=20V; V_{DS}=0V$       |     |     | 0.1 | $\mu A$   |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}=120V; V_{GS}=0V$      |     |     | 1   | $\mu A$   |
| $V_{SD}$     | Diode forward voltage          | $I_F=56A; V_{GS}=0V$          |     |     | 1.1 | V         |